U. S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION

1. PROJECT TITLE/PARTICIPANT	2. DATE	3. IDENTIFICATION NUMBER
Environmental Management/Bechtel Jacobs Company LLC	10/01/02	DE-AC05-98OR22700

4. WBS ELEMENT CODE	5. WBS ELEMENT TITLE
04.04.01.04	C-410 Feed Plant Complex

6. INDEX LINE NO.	7. REVISION NO. AND AUTHORIZATION	8. DATE
N/A	Rev 3	5/29/03

9. APPROVED CHANGES
N/A

10. SYSTEM DESIGN DESCRIPTION	11. BUDGET AND REPORTING NUMBER
N/A	N/A

12. ELEMENT TASK DESCRIPTION

WBS GRAPHIC

See attached.

INTRODUCTION

The purpose of the D&D project is to plan and implement the decontamination and/or demolition of the C-410 structures. Specific activities will be undertaken to stabilize the structures; prepare regulatory documentation under the CERCLA Process; perform infrastructure (process equipment and material) removal; perform structure demolition and remediation of any contaminated underlying soils, consistent with its anticipated future use and public input.

In the Site Evaluation Phase, activities were focused on preparing the C-410 Complex for Decontamination and Decommissioning Activities. Specific actions included preparation of needed facilities; hiring and training work force; preparing CERCLA Decision Documents supporting the removal action to remove process equipment and infrastructure; and minor building maintenance and upkeep in preparation of the D&D work.

In the Infrastructure Phase, stored materials and equipment, process piping, heating, ventilation, air conditioning systems and equipment, and utilities will be removed and disposed, leaving essentially the building structure. During this phase, the CERCLA Decision Documents supporting the Facility Structure D&D will be prepared.

In the Facility Structure D&D, the actual building will be demolished to the ground surface. Basement or other holes will be filled in to prevent water accumulation and to eliminate potential for personnel or animals to fall into them. The environmental media impacted by the presence of the building will be evaluated as a part of the GDP D&D Program.

Removal, decontamination, and transfer of ownership of surplus equipment for reuse or recycle, such as fluorine cells, will also be included in this project. This activity is also a subproject of the C-410 D&D Project.

Supporting these individual phases are subprojects Technical Management and Integration; Newly Generated Waste Management; and Support of DOE Primes, which cross cut the individual activities.

The Building C-410 Feed Plant Complex WBS Element Structure is as follows:

WBS 1.12.04.04.01.04.01 C-410 Management & Integration
WBS 1.12.04.04.01.04.02 C-410 Site Evaluation
WBS 1.12.04.04.01.04.03 C-410 Infrastructure D&D (Non-time critical removal action)
WBS 1.12.04.04.01.04.04 C-410 Facility Structure D&D (Remedial action)
WBS 1.12.04.04.01.04.05 C-410 Environmental Media (Remedial action continued)
WBS 1.12.04.04.01.04.06 C-410 Newly Generated Waste

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WBS 1.12.04.04.01.04.07 C-410 DOE Prime Support
WBS 1.12.04.04.01.04.08 C-410 Capital Equipment
WBS 1.12.04.04.01.04.09 C-410 Removal Action Technical Support
WBS 1.12.04.04.01.04.10 C-410 Reuse and/or Recycle of Equipment

LOGIC RELATIONSHIP

Prior to any activity inside the building, a Facility Safety Authorization Basis must be in place. A revision of the SAB due to the discovery of materials in the building containing greater than 1 wt% U-235 has been completed. Additionally, the facility is undergoing a reclassification to a Category 2 Nuclear Facility. A BIO is under development, and must be completed and approved to serve as the authorization basis prior to start of D&D of systems that contain uranium holdup. During the Site Evaluation phase, CERCLA decision documentation (EE/CA, Action Memorandum) will be completed prior to implementing the Infrastructure removal. Following the Site Evaluation, the Infrastructure D&D Phase will begin. During this Phase, the Removal Action Work Plan will be finalized, and all staged materials and process equipment, utilities, and ancillary equipment will be removed, packaged, and dispositioned according to the CERCLA Documentation. Additionally, during this phase CERCLA decision documentation for the C-410 Remedial Action (Facility Structure and Environmental Media Phase) which includes structure demolition to grade, and disposition of debris generated from demolition. The soils and environmental media impacted by the facility will be addressed following Facility Structure demolition by the GDP D&D Program.

SCOPE DESCRIPTION

RELEASE SITES & FACILITIES
The following activities are to be completed for the SWMUs that exist within the C-410 Complex.

Assessments to be completed

SWMU	Release Site ID	Description
478	3095	C-410/420 Feed Plant
494		Ash Receiver Area in C-410/420
495		C-410/420 Ash Receiver Shed
496		C-410/420 F2 Filters in Northeast Mezzanine
497		C-410/420 F2 Cell Neutralization Room Vats
498		C-410/420 Sump at Column C&D-1&2
499		C-410/420 Sump at Column H-9&10
500		C-410/420 Sump at Column U-10&11
501		C-410/420 UF6 Scale Pit Sumps A&B
502		C-410/420 Sump at column U-9
503		C-410/420 Sump at Column G-1
504		C-410/420 Sump at Column L-10
505		C-410/420 Sump at Column A-3N
506		C-410/420 Sump at Column Wa-9
507		C-410/420 Condensate Tank Pit
508		C-410/420 Settling Basin
509		C-410/420 Drain Pit
510		C-410/420 Sump at Column P&Q-2
511		C-410/420 Sump at Column Q&R-2
512		C-410/420 Sump at Column R-2
513		C-411 Cell Maintenance Room Sump

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Actions to be completed

SWMU	Release Site ID	Description
478	3095	C-410/420 Feed Plant
494		Ash Receiver Area in C-410/420
495		C-410/420 Ash Receiver Shed
496		C-410/420 F2 Filters in Northeast Mezzanine
497		C-410/420 F2 Cell Neutralization Room Vats
498		C-410/420 Sump at Column C&D-1&2
499		C-410/420 Sump at Column H-9&10
500		C-410/420 Sump at Column U-10&11
501		C-410/420 UF6 Scale Pit Sumps A&B
502		C-410/420 Sump at column U-9
503		C-410/420 Sump at Column G-1
504		C-410/420 Sump at Column L-10
505		C-410/420 Sump at Column A-3N
506		C-410/420 Sump at Column Wa-9
507		C-410/420 Condensate Tank Pit
508		C-410/420 Settling Basin
509		C-410/420 Drain Pit
510		C-410/420 Sump at Column P&Q-2
511		C-410/420 Sump at Column Q&R-2
512		C-410/420 Sump at Column R-2
513		C-411 Cell Maintenance Room Sump

The C-410 Complex has a combined structure footprint of 235, 625 SF. The following specific structures are included in this subproject. C-410 Feed Plant, C-410-A Hydrogen Holder, C-410-C HF Neutralization Building, C-410-E HF Emergency Holding Pond, C-410-F HF Storage Building (North), C410-G HF Storage Building (Center), C-410-H HF Storage Building (South), C-410-I Ash receiver Shelter, C-410-J HF Receiver (East), C-411 Cell Maintenance Building and the C-420 Green salt Plant.

PAST AND FUTURE ACCOMPLISHMENTS

PAST ACCOMPLISHMENTS

? Issued and received approval for D1 Action Memorandum, issued signed AM and D1 Removal Action Work Plan for Infrastructure D&D.
? Initiated packaging for disposal of wastes generated during Site Evaluation.
? Evaluated feasibility of reenergizing building transformer damaged by flooding. Determined installation of new temporary power system most cost effective method of restoration of power in C-410 Complex to allow use of cranes, building lighting, and waste processing equipment during Infrastructure D&D.
? Obtained regulatory agency approval of EE/CA for Infrastructure D&D and issue for public comments.
? Completed treatment and disposition of water from basement of C-410 Complex.
? Completed project to Isolate (cut and cap) known waterlines that enter C-410 to prevent future waterline freezes and ruptures.
? Repaired roof leaks in C-411 (Zone 64) for use as a boundary control station.
? Completed documentation necessary (procedures, nuclear criticality safety evaluations, etc), train needed workforce, and relocated potentially fissile items into appropriate storage, as required by the Safety Authorization Basis.
? Initiate removal action design for Infrastructure Removal.

FUTURE ACCOMPLISHMENTS

? Initiate and complete Infrastructure D&D.

? Install Construction Electrical Power.
? Acquire and install waste processing equipment.
? Design and construct laydown /receiving area.
? Upgrade Ingress/Egress Areas to C-410 Complex.
? Crane and Elevator Refurbishment.
? Packaging and shipment for disposition of waste generated during Infrastructure D&D.
? Complete support of DOE in transfer of F2 Cells and support equipment to ToxCo.
? Complete C-410 Infrastructure Removal.
? Continue packaging and shipment for disposition of waste generated during Infrastructure D&D.
? Initiate and complete Decision Document process for facility structure D&D.
? Complete Waste Disposition.

SCOPE

1.12.04.04.01.04.01 TECHNICAL MANAGEMENT AND INTEGRATION

Technical Management and Integration activities include the technical, subcontract, and project management necessary to ensure that all activities in the WBS elements are completed on schedule, within budget, and without safety or environmental incident. Technical Management and Integration includes the Project Management oversight and Project Controls personnel who will perform project management, subcontractor oversight, ES&H support, and project scheduling and estimating. Other BJC/M&I support activities will be captured in individual WBS elements.

The Life Cycle Baseline and Baseline Management activities will be performed on a routine basis.

Baseline Change Proposals – Prepare BCP documentation to make necessary modifications to the baseline when scope, schedule, or cost changes are determined necessary.

Specific activities include:

- Ensure completion of all activities within the subproject is in compliance with the principals of Integrated Safety Management.
- Maintain contact and open communications with the appropriate DOE Project Manager on the subproject activities.
- Participate in biweekly technical information and monthly Project Status Review meetings to provide the DOE with project status summaries.
- Manage the subcontracts and work authorizations issued to complete the work under the subproject.
- Respond and supply information to DOE for Lessons Learned, surveillance and audits, Site-Specific Advisory Board support, and other DOE reporting mechanisms.
- Maintain the monthly subproject estimates and estimates at completion.

1.12.04.04.01.04.02 SITE EVALUATION

This activity was completed in FY 2002.

1.12.04.04.01.04.03 INFRASTRUCTURE D&D

During the Infrastructure D&D Phase, all process related and utility equipment and staged materials will be removed, staged, packaged for disposal, and shipped offsite for treatment or disposal in accordance with the EE/CA and Removal Action Work Plan. Typical tasks include; drain, flush and remove process and infrastructure systems, ancillary hardware (interior and exterior to the structure). Remove non-load-bearing walls, perform preliminary characterization, and decontaminate areas above release criteria, conduct final characterization.

1.12.04.04.01.04.04 FACILITY STRUCTURE D&D

This element includes activities necessary to demolish the structure remaining after completion of the removal of process and chemical equipment is completed in the previous (Infrastructure D&D) Phase. Buildings will be removed to the slabs and any holes, basement, etc. will be backfilled. This phase will include development of EE/CA, AM, and RAWP supporting the Facility Structure D&D; implementation of the Structure D&D consistent with the CERCLA Documentation; and waste disposition.

1.12.04.04.01.04.04 ENVIRONMENTAL MEDIA

Environmental Media will be addressed by the GDP D&D Program.

1.12.04.04.01.04.06 NEWLY GENERATED WASTE

Activities in this WBS will involve in waste processing and waste disposal. These activities include establishing an area designated for processing and packaging of wastes generated during the Infrastructure removal; obtaining necessary materials and equipment for waste packaging; coordinating with onsite waste management subcontractor to place any hazardous or TSCA wastes in appropriate storage; and packaging and transfer of wastes for treatment and disposal.

1.12.04.04.01.04.07 DOE PRIME

Disposal cost for waste generated by this project will be developed and then transferred to the appropriate DOE Prime WBS

1.12.04.04.01.04.08 CAPITAL EQUIPMENT

Obtaining waste handling and waste processing equipment.

1.12.04.04.01.04.09 REMOVAL ACTION TECHNICAL SUPPORT

This element includes activities required to plan and initiate the Infrastructure D&D (process and chemical equipment) removal from the C-410 Complex. This activity will include preparation of the Removal Action Work Plan and submittal to the regulatory agencies; coordination of BJC Field Staff and Self Performing PACE workers and supervision, and integration of field activities with support subcontractors including but not limited to Davis Bacon craft and Supervision; Field Engineering; Radiological Control Support; Waste Operations Subcontractor; and Nuclear Criticality Support Subcontractor, and management of generated wastes.

Updating training requirements for work force, including supervision and field staff, will be performed. Provide and equip office space for additional engineering resources necessary to accomplish equipment design and procurement. Complete development and obtain DOE approval of a Basis for Interim Operations to serve as the Safety Authorization Basis. The BIO is being prepared in response to Unreviewed Safety Question Determiation (USQD -RMC410X-0020R0, dated 3/14/02), which identified potential for adequate quantities of transuranics to be present in the C-410 Complex to result in changing the facility classification from Radiological to a nuclear facility. Perform annual review and revision of the BIO throughout the infrastructure removal project.

Continue development of the DSA.

1.12.04.04.01.04.10 REUSE AND/OR RECYCLE OF EQUIPMENT

Collect historical information regarding previous characterization of fluorine cells; assist DOE in preparing a

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statement of work for cell and ancillary equipment sale to an outside vendor; develop schedule and estimate for cell and ancillary equipment removal and turnover to successful bidder for packaging and shipment.

This element includes the activities necessary to support disposition of equipment or materials from the C-410 Complex through reuse or recycle. Scope will include necessary activities to identify material or equipment with potential for successful recycle or reuse; supporting necessary contractual activities for sale and or transfer of ownership; planning, designing, scheduling, and executing the removal of the equipment from the Complex; preparation for release and shipment of equipment, and packaging and shipment of materials or equipment consistent with reuse agreements.

The FY 2002 Scope included the planning and beginning removal of electrical buswork, electrical switches, fluorine cell stands, auxiliary equipment (spare parts, etc) and fluorine pumps that are located throughout the C-410 Complex. The equipment will staged in Sea Land Containers or other similar containers in preparation for future sales or reuse. Additionally, fluorine production equipment and spare parts are currently located in other parts of the Paducah Plant will be retrieved and staged with the removed equipment.

List of structures included in this subproject**;** C-410 Feed Plant, C-410-A Hydrogen Holder, C-410-C HF Neutralization Building, C-410-E HF Emergency Holding Pond, C-410-F HF Storage Building (North), C410-G HF Storage Building (Center), C-410-H HF Storage Building (South), C-410-I Ash receiver Shelter, C-410-J HF Receiver (East), C-411 Cell Maintenance Building and the C-420 Green salt Plant.

REQUIREMENTS/DRIVERS
Bechtel Jacobs Company LLC Contract DE-AC05-98OR22700, December 18, 1997
Integrated Safety Management System Description, BJC/OR-87, Revision 1, April 1999
As applicable, indicate other regulatory-related requirements.
CERCLA: Y RCRA: N DNFSB: N DOE Orders: Y AEA: Y UMTRCA: N State: N Other: N

WASTE VOLUMES

Please see attached waste performance metrics, as applicable.
The waste quantities supporting the method of accomplishment and basis of estimate are consistent with data reported on the Waste Performance Metrics Form.

PROJECT SCHEDULE

Please see attached project summary schedule and Milestone Status Summary Report.

EXECUTION YEAR BASELINE

Please see attached Budgeted Cost of Work Scheduled Plan.

BASELINE BY YEAR

Please see attached Baseline by Year Report.